Science and Industry

The stems of several different shrubs and trees are used by the natives of Santo Domingo in the nature of a toothbrush, or as what the natives call a "chew stick." Among others the stems of the orange, the lemon, and the membrillo or quince tree are used on account of the agreeable flavor of these woods. But the most commonly used is a plant ordinarily called "guano" which is probably the same as the ozo called in Spanish "palma de guano" with the scientific name Trynax argentea. "Guano" grows in large quantities in the vicinity of Bani and San Chistobal. The natives use the green stem, the end of which they chew up and use in the nature of a toothbrush. It is said that the natives of Porto Rico, Jamaica, and other West Indian countries allow the chew sticks to become dry before using them.

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Sunlight is so important to life that it is little wonder that sun worshipers prevailed in primitive days. Plant a potato in your cellar, and if there is a little light the potato will sprout and try to grow. Surround it with the best fertilizer, water it, and do the best you can for it except that you keep it in the dark, and it cannot digest and grow. See how slender and pale it is! The process of digestion, the great function of assimilation, cannot go on without sunshine. Nature's laws are the same in the animal world. It is just as true that the only girls with red cheeks and sweet breaths, the only girls who become fully ripe and sweet, are those who baptize themselves fully in glorious sunshine. The many pale girls who are to be seen with a bloodless, half baked sort of face, whose walk, whose voice, and whose whole expression is devoid of spirit, are not half ripe.

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The suggestion that there are air-quakes, due to explosions of meteorites, and quite independent of earthquakes and volcanoes, comes from no less an authority than W. F. Denning, the astronomer. That such explosions are sometimes audible is well known. Prof. W. M. Foote has just recorded that a large meteorite falling near Holbrook, Ariz., at 6:30 p. m. on July 12, 1912, broke up with a loud noise that lasted half a minute or more, and scattered over a stretch of three miles of sandy desert, more than 14,000 of the fragments—of a total weight of nearly 500 pounds—having been picked up and preserved. The exploding bodies, of course, are not always seen. Other similar instances have been recorded, and two meteorite explosions noted in 1877—on Nov. 26 and 23—were estimated to have created air disturbances more than a hundred times as violent as a loud peal of thunder.

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The peculiar agricultural limitations of Japan were brought out in a recent paper by Miss E. C. Semple to the Royal Geographical society of England. With an equable island climate and food from both land and sea, the conditions favored the development of early civilization, but the lack of new area to cultivate for the growing population soon brought the stage of intensive agriculture. Production within the island area has been handicapped. Forests and barren land make cultivation rare above 2,300 feet, and the arable land of Japan is only 14.37 per cent of the total area, which is a lower percentage than is known elsewhere except in Finland, Sweden, and Norway—sparsely populated countries. The staple crop, rice, is confined to the vicinity of rivers and streams. The available soil is not of fertile kind, and low efficiency is promoted by the practical absence of stock raising. A few attempts to reclaim barren and ill watered wastes are being made by wealthier farmers or companies.

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Dr. Leo Frobenius, chief of the German Central African exploration expedition, who asserts that he has located the exact site of the lost Atlantis, has just expounded his views and the results of his travels before the kaiser. The kaiser is much interested in the trophies that Frobenius obtained in support of his Atlantis views, particularly the collection of terra cottas. "One sees that these never were made by negroes," was his majesty's terse comment. The emperor also thought the terra cottas were portraits, as every head is different. Dr. Frobenius exhibited the photograph of a Byzantine imperial castle which he had discovered in the heart of Africa. He explained that most of his exploration had taken place on British soil, but he had run across the ruins of a Persian city on German territory. This statement evoked a spontaneous outburst from the kaiser, to the effect that everything must be done to enable a thorough excavation of the ruins. Dr. Forbenius, therefore, will probably soon return to Africa with imperial backing.

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Dr. Castex read a paper recently on the relation between the acoustic (sound) properties of public halls and hearing and phonation, that is, voice production. He said that the acoustics of many halls were excellent, but in other cases they were bad. There were yet others in which the acoustic properties were satisfactory for the audience, but deplorable for the speaker, on account of the strain imposed on him. The reason of these differences he could not explain. Halls might be bad by reason of deadness, of overresonance, or on account of echo. The materials of construction undoubtedly exercised an influence. Wood, glasswork, and marble afforded good resonance, draperies bad. Stones and plaster were regarded as neutral. In course of time the drying of the material improved its sonorousness. Cupolas created unfavorable conditions, which exaggerated resonance. Speaking generally, good halls were those in which one of the dimensions exceeded the other. Round and square halls were less satisfactory.